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Subject Summary of 9-17-08 meeting on EW HH exposure issues

History: This message has been forwarded.

Ravi,
Debra, Gary and I appreciated meeting with you and Lon to discuss (informally) issues and options for EW HH exposure scenarios. This email summarizes the discussions we had. This summary does not document any final decisions as we understand that discussions with the tribes still need to occur.
As described in the draft final CSM, the exposure pathways and scenarios that were discussed are based on the scenarios used in the LDW HHRA (Windward 2007), as well as on the specific geography and ecology of the EW, and the human activities known or expected to occur there. The specific exposure parameters are consistent with the LDW HHRA when appropriate, and are considered to address both present and future exposures to contaminated sediment

Sediment exposure scenario issues:

- EWG noted that the information from human access survey is expected to be mainly about where access is located and who has access to EW intertidal, not about what activities people are currently engaged in on the waterway (e.g. clamming, swimming). Therefore this information may more inform exposure areas than activities. The human access memo will be discussed more at a stakeholders meeting on September 23rd.
- EWG proposed recreational clamming (7 days/year for 30 yrs) to cover shore recreation exposures. Lon noted that there is no technical basis for the recreational scenario frequency but it may provide risk information to stakeholders. The recreational clamming scenario will also provide consistency with the LDW HHRA
- Per the CSM, there will also be a habitat biologist (occupational scenario, 15 days/year for 20 years), which would include areas not accessible to recreational shore clammers.
- EWG has concerns about applying high frequency and exposure duration clamming scenarios to the EW in assessing risks specific to the site given the size and quality of habitat. However, to maintain consistency with the RME scenario evaluated in the LDW HHRA, the EWG proposes a tribal RME clam scenario with the same exposure parameters as the Tribal RME scenario for the LDW (120 days/year for 70 years). Exposure areas would include all intertidal areas that have sediment present in the EW
- EWG noted in areas where sediment sampling is not possible (e.g. rocky/cobbly intertidal at Jack Perry Park) there is no complete route for sediment exposure. This does not mean that people do not recreate at these locations (boat launching, fishing, swimming) but there is not a direct sediment exposure route.

Seafood consumption scenario issues:

- EWG proposes to follow the Tribal Framework, and to be consistent with the LDW HHRA, for the tribal consumption rate to be used for the RME scenario. The tribal consumption rate for the RME would be based on the Tulalip study. Ravi noted EPA will need to discuss this with the tribes.
- EWG noted that rockfish were part of the bottomfish category in the Suquamish consumption survey, rather than in the pelagic category as was the case for the Tulalip and API surveys.
- EWG and EPA noted that the pelagic category might be apportioned between rockfish and perch consumption based on reported consumption of each species in the appropriate study. This would be pretty straightforward for the Tribal scenarios. For the API scenario, judgment may be needed because people were not asked about marine perch consumption. EPCs would then be calculated for perch and rockfish separately. This is a similar approach to how consumption of different shellfish groups(crab, clam, mussel) was handled in the LDW HHRA.
- The single shrimp sample with limited tissue for analysis was discussed EWG proposed that this sample be prioritized for ERA needs regarding what chemicals to analyze. EWG proposed including consideration of the shrimp sample's potential impact on seafood consumption risk estimates in the Uncertainty portion of the HHRA, rather than include it in the quantitation of exposures for risk characterization. This is because shrimp does not appear to be a viable fishery in EW based on the sampling effort and the seasonal sampling surveys conducted in the LDW. Lon and Ravi will consider this proposal.
- EWG proposes including chemical concentration data from all clam species collected from shore in the calculation of a single clam EPC. This approach would reflect what someone might collect in the EW. EPA expressed interest in a weighted approach considering the volume of different tissue types collected. EWG noted this approach would not allow computation of a UCL (i.e. the max conc from each shellfish species would be used). Lon is considering this further.
- Lon proposed reallocating the shellfish portion of the market basket to include geoduck. EWG indicated this seemed reasonable for the Tribal studies because tribal collection could occur and consumption rates can be identified. However, EWG proposed that including geoduck in the market basket approach for the API scenario or one meal per month scenario would not be appropriate, since scuba gear are required for collection (unlikely for the general public) and geoducks are harvested by commercial divers in Puget Sound (many being tribal commercial divers). Lon seemed think this was reasonable and will let EWG know if he has other thoughts.
- EWG proposed using the same data rules for EPC calculation (# of samples, when to use ProUCL vs taking a max , etc) as were developed for the LDW. Lon and Ravi did not express objection.

Water exposure scenario issues:

- EWG proposed that the same exposure parameters from the adult swimmer scenario from the HHRA in the King County WQA study (exposure frequency, surface area, etc.) be used to calculate risks for the swimmer scenario for the EW. The water EPC would be based on pooled existing KC data plus the new water data; the data sets will be evaluated to determine if concentration data reasonably overlap. Lon and Ravi said more discussion would be needed on the issue of how to use existing and newer water data but agreed with the use of KC WQA exposure parameters.

Risk results presentation issue:

- EWG proposes to include a TEQ excess cancer risk sum for dioxin and PCB TEQ risk combined, and to continue to present total excess cancer risk estimates in two ways for PCBs (one excluding total PCBs and one excluding PCB TEQ; dioxin TEQ would be

included in both totals). Totals without dioxin TEQ might also be included for informational purposes so they could be compared more directly with LDW risk estimates.

Action items:

- EPA will be talking with the Tribes next week about exposure issues
- Lon will look at Tulalip survey data for apportionment of pelagic fish(to perch and rockfish) and shellfish (to mussels, shore clams, crabs, and geoduck) and at the API survey data for apportionment of pelagic fish to perch and rockfish
- EWG requests a meeting with EPA, EWG, and the Tribes in mid October to discuss exposure issues in order to keep the human health tech memo on schedule

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